AMENDMENTS TO THE CLAIMS

11. (Currently Amended) A method for displaying scanned ultrasound images of tissue, the method comprising the steps:

mounting an ultrasound probe to a mechanical head;

connecting the head to a three-dimensional positioning system;

positioning the probe in proximate orthogonal relation to the tissue;

controlling the three-dimensional positioning system by a computer for moving the probe during a scan;

transmitting high frequency ultrasound waves whose nominal frequency is included within the range from 30 to 100 MHz and with a large pass band, adapted to frequencies reflected by the tissue, for combining very high spatial resolution and a field of investigation covering both the anterior and posterior segments of an ocular globe;

focusing beams of ultrasound transmission in a given zone of the tissue over a vertical penetration distance of between 20 and 30 mm;

acquiring signals reflected by the tissue during a scan; and

processing the acquired signals to form an image of the scanned tissue.

12. (Previously Presented) The process according to claim 11, wherein the tissue to be scanned is in a posterior segment of an ocular globe.

13. (Previously Presented) The process according to claim 11, wherein the tissue to be scanned is in an anterior segment of an ocular globe.

14. (Previously Presented) The process according to claim 11, wherein the tissue to be scanned is in a human ocular globe.

15. (Previously Presented) The process according to claim 11, wherein the tissue to be

scanned is investigated during an examination chosen from the group consisting of gynaecology, obstetrics, gastro-enterology, cardio-vascular, coelioscopy, or dermatology.

16. (Currently Amended) An apparatus for displaying scanned ultrasound images of tissue structure, the apparatus comprising:

an ultrasound probe mounted to a mechanical head;

a three-dimensional positioning system mounting the head thereto for positioning the probe in proximate orthogonal relation to the tissue;

computer means for controlling the three-dimensional positioning system thereby moving the probe during a scan;

the probe transmitting high frequency ultrasound waves whose nominal frequency is included within the range from 30 to 100 MHz and with a large pass band, adapted to frequencies reflected by the tissue, for combining very high spatial resolution and a field of investigation covering both the anterior and posterior segments of an ocular globe;

means for focusing beams of ultrasound transmission in a given zone of the tissue over a vertical penetration distance of between 20 and 30 mm;

means for acquiring signals reflected by the tissue during a scan; and

means for processing the acquired signals to form an image of the scanned tissue.

17. (Previously Presented) The apparatus set forth in claim 16, together with means for electronically modifying a focal distance of the ultrasound probe in order to adjust the focal point of the probe.

18. (Previously Presented) The apparatus set forth in claim 16, together with a servo-mechanism system for mechanically modifying focal distance of the ultrasound probe.

19. (Previously Presented) The apparatus set forth in claim 16, wherein the computer means for controlling the three-dimensional positioning system steers stepping motors that permits the probe to generate an arciform scan of the tissue.

20. (Previously Presented) The apparatus set forth in claim 16, wherein the computer means for controlling the three-dimensional positioning system steers stepping motors that permits the probe to generate a Cartesian scan of the tissue .

21. (Previously Presented) The apparatus set forth in claim 16, together with coupling means connected at a first end thereof to the probe, an opposite end being opened, for directing the ultrasound waves toward the tissue.